

# Teacher's Guide



## Hopewell Furnace Chronology

**B.C.**

- 3000** Iron first produced in Asia Minor (Turkey)
- 2000** Iron produced in Nubia (East Africa)
- 1800** First iron weapons made by the Hittites (Turkey)
- 1050** Iron produced in Greece
- 790** Iron produced by Nok Culture (Nigeria)
- 512** Iron produced in China
- 400** Iron produced by Celts of Southern Britain

**A.D.**

- 300** Iron produced by Romans
- 1000** First iron produced and forged in North America by Vikings in Greenland and northern Newfoundland (Canada)
- 1543** Survivors of Spanish expedition led by Hernando DeSoto produce first iron forged in future United States (Arkansas)
- 1621** First blast furnace in British colonies built at Falling Creek, Virginia - destroyed by Native Americans before going into production
- 1644** First successful iron works in British colonies established at Braintree, Massachusetts
- 1710** Coke is invented in England - used as fuel in iron furnaces
- 1716** Thomas Rutter builds bloomery forge near what is now Pottstown, Pennsylvania
- 1720** Thomas Rutter builds Colebrookdale, the first blast furnace in the American colonies, near Pottstown, Pennsylvania
- 1732** Samuel Nutt's bloomery grows into famous Coventry Iron Works (Coventryville, Pennsylvania) the first steel furnace in Pennsylvania
- 1740** Sands Forge on Hay Creek in Berks County started by William Bird, father of Mark Bird, first owner of Hopewell Furnace
- 1742** Benjamin Franklin invents the Pennsylvania Fireplace
- 1744** Hopewell Forge built by William Bird

**A.D.**

- 1750** Iron Act, limiting the ability of colonial iron industry to produce finished products, passed by British Parliament
- 1761** William Bird dies leaving estate to son Mark
- 1762** At Carron Ironworks in Scotland the first cast iron is converted into malleable iron
- 1771** Hopewell Furnace built by Mark Bird, using slaves and free laborers
- 1772** Oldest known product produced by Hopewell Furnace, a six-plate stove
- 1775** Beginning of the American Revolution
- 1776** Congress advances Mark Bird \$2,000 to cast cannon
- 1777** The Board of War discharges Hopewell Furnace workmen from militia, stating their work at an iron furnace was more important than their service in the militia
- 1778** Mark Bird ships a thousand barrels of flour down the Schuylkill River to Washington's troops at Valley Forge
- 1780** Gradual Emancipation Act passed in Pennsylvania (most slaves in Pennsylvania worked in iron industry)
- 1781** General Cornwallis surrenders to General Washington at Yorktown, ending American Revolution
- 1786** Because of debt from war and poor economy, Mark Bird puts Hopewell Furnace up for sale; no buyer found
- 1788** Hopewell Furnace property auctioned off and Mark Bird flees to North Carolina to escape remaining creditors
- 1800** Daniel Buckley and his brothers-in-law Thomas and Mathew Brooke purchase Hopewell Furnace for 10,000 pounds sterling; 5,000 acres, two mines, and the furnace are included
- 1807** Jefferson enacts U.S. Embargo Act, limiting trade with Britain and France
- 1808** Buckley-Brooke partnership closes Hopewell Furnace because of trade embargo and legal problems with William Penn's heirs over land grants
- 1815** Congress enacts protective tariffs
- 1815** Opening of the Schuylkill and Union Canals
- 1816** Mark Bird dies in North Carolina
- 1816** Hopewell Furnace goes back in blast, after being shut down for eight years
- 1826** Hopewell Furnace produces door frames and peepholes for Eastern State Penitentiary in Philadelphia

**A.D.**

- 1828** Hot blast iron smelting developed in Scotland (preheated air was blown into furnace) producing more iron with less fuel
- 1830-1838** The most prosperous period at Hopewell Furnace occurs under the guidance of ironmaster Clement Brooke, son of Mathew Brooke; in 1836-37 the furnace is operated continuously for 445 days and produces 1,160 tons of castings, earning over \$40,000 gross for the owners of the furnace; furnace workers earn from \$200 to \$300 a year
- 1837** Bank panic; depressed economy causes major setback to iron industry
- 1838** Pennsylvania legislature authorizes corporations to make iron using coal as fuel, contributing to decline at Hopewell Furnace
- 1830s-1850s** Runaway slaves on the Underground Railroad occasionally use Hopewell Furnace as a stop on their journey from the South
- 1839** Opening of the Philadelphia and Reading Railroad; Hopewell Furnace makes its first shipment of stoves by rail
- 1844** Stove casting ends at Hopewell; only pig iron is produced from 1844 until 1883
- 1853** Anthracite furnace constructed and put into blast at Hopewell Furnace - proves to be unsuccessful and shut down in less than two years
- 1861-1865** The Civil War; the price of pig iron (the only product made at Hopewell Furnace during this time) rises from \$30/ton to over \$90/ton
- 1861** Morrill Tariff Act places strict duties upon imported iron and steel; helps Hopewell Furnace continue to produce iron during and after the Civil War
- 1883** Hopewell Furnace shuts down after 112 years of operation
- 1935** Hopewell Furnace purchased by the U.S. Government; Civilian Conservation Corps begins restoration of furnace community
- 1938** Hopewell Village established as National Historic Site, becoming the first site in the National Park Service to commemorate our industrial history
- 1985** Hopewell Village's name changed to Hopewell Furnace National Historic Site
- Present** Approximately 100,000 visitors a year tour Hopewell Furnace National Historic Site